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HARVARD UNIVERSITY
THE BIOLOGICAL LABORATORIES
16 DIVINITY AVENUE
CAMBRIDGE 38, MASSACHUSETTS

1/13/62

July 11, 1962

Professor Joshua Lederberg
Department of Genetics
Stanford University Medical School
Stanford, California

Dear Josh:

If all goes well I shall be on sabbatical leave in 1963-1964, and I plan to work with Georges Cohen in Gif. My purpose will be to study regulatory mechanisms of photosynthesis in photosynthetic bacteria, either Rhodopseudomonas spheroides or Rhodospirillum rubrum.

The photosynthetic bacteria seem to be ideal material for such an investigation since they can be cultured under a variety of conditions as either heterotrophs or photoautotrophs. The level of chlorophyll synthesis can also be controlled through light intensity and the cells can be grown either aerobically or anaerobically. There is already some evidence to show that photosynthetic growth with acetate represses the activity of enzymes that are involved in heterotrophic carbon metabolism. What is more, it has recently been shown that photosynthetic growth with acetate leads to the incorporation of acetate into one set of intermediates when anaerobiosis is obtained with hydrogen and into a different set when nitrogen is used. In general, there are several different ways in which the organisms can be handled so as to affect their heterotrophic or photoautotrophic growth. No one has, at least to my knowledge, looked at control mechanisms concerned with photosynthesis, and both Georges and I are intrigued by what may develop.

Levine, R.P.

Having written this long discourse, I now come to the purpose of my letter. I am applying for fellowships to both the N. S. F. and N. I. H. and would like to know if I can impose upon you for letters of recommendation. I hope to have letters from three people outside of this department and particularly from one or two with whom I have had some contact for several years.

Best regards from Elizabeth and myself,

Sincerely,

Paul

R. P. Levine
Associate Professor
of Biology

RPL / JAS